

(III) a second substrate bonded to the adhesive layer, wherein the second substrate is selected from glass, metal, plastic, wood, and ceramic.

30. (Amended) A construction comprising:

(I) an article for establishing a seal between two substrates, comprising:

(a) a conformable, compressible, melt flow-resistant foam core;

(b) a photo-activated, epoxy-containing bulk layer having a first and second major surface, said foam core bonded to the second major surface of said bulk layer; and

(c) an epoxy-containing adhesive layer bonded to the first major surface of said bulk layer, wherein upon photo-activation, said bulk layer has a different curing rate than said adhesive layer;

(II) a first substrate bonded to the foam core; and

(III) a second substrate bonded to the adhesive layer; wherein the first substrate and the second substrate are each independently selected from glass, metal, plastic, wood, and ceramic substrates.

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**REMARKS**

Claims 11-30 are pending in the present application. By this Amendment, the specification is amended, and claims 29-30 are amended. Applicants respectfully request reconsideration of the present claims in view of the foregoing amendment and the following remarks.

A marked-up version showing the changes made to the specification and claims is concurrently filed with this amendment.

**I. Formal Matters:**

**Amendments to Specification**

Applicants have amended the specification as suggested by Examiner Chang to incorporate some of the language of new claim 22 (similar to language in original claim 6) into the specification. The language of new claims 21 and 23-30

already has support in the specification as noted in Applicants' July 03, 2002 Amendment and Response.

Claim Rejections Under 35 U.S.C. §112, First Paragraph

Claims 29-30 are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e., claims 29-30 contain "new matter").

Applicants have amended claims 29-30 as shown above to clarify that the construction comprises a glass substrate (claim 29) or a first substrate (claim 30) bonded to a foam core, not the bulk layer as previously recited. By way of example, Applicants point to FIG. 2, which depicts the claimed article including a core layer 30 bonded to a major surface 26 of the bulk layer 22 and further bonded to a substrate 32 via bonding layer 34. In addition, as disclosed on page 12, lines 28-29 of the specification, bonding layer 34 may be provided on substrate 32 or on a surface of core layer 30. Applicants also point to page 19, lines 5-9 of the specification, which describes the combination depicted in FIG. 3, wherein the combination comprises a multi-layered sealant 50 having a bulk layer 52 and an adhesive layer 54 applied between a metal frame 60 of a motor vehicle and the inner surface 62 of a windshield 64. The multi-layered sealant 50 also includes a core layer 56 and a bonding layer 58. Applicants further point to page 17, lines 15-29 of the specification, where suitable substrates sealed by the article of the present invention include glass, metal, plastic, wood, and ceramic substrates.

For at least the reasons given above, Applicants respectfully submit that amended claims 29-30 are supported in the original disclosure and do not contain new matter. Claims 29-30 meet the requirements of 35 U.S.C. §112, first paragraph. Accordingly, withdrawal of this rejection is respectfully requested.

Claim Rejections Under 35 U.S.C. §112, Second Paragraph

Claims 29-30 are also rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which Applicants regard as the invention.

For at least the reasons given above, Applicants respectfully submit that amended claims 29-30 meet the definiteness requirements of 35 U.S.C. §112, second paragraph. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection of Claims 21-28 Under Obviousness-Type Double Patenting Over U.S. Patent No. 6,316,099 In View Of European Patent No. 0392090

The Office Action rejects claims 21-28 under the judicially created doctrine of obviousness-type double patenting over claims 1-2 and 6-8 of U.S. Patent No. 6,316,099 issued to George et al. in view of European Patent No. 0392090. This rejection is respectfully traversed.

*wrong  
11-20  
depend*

Applicants respectfully submit that an obviousness-type double patenting rejection over claims 1-2 and 6-8 of U.S. Patent No. 6,316,099 is prohibited under 35 U.S.C. §121. Applicants note that claims 21-28 depend from original claims 11-20. Original claims 11-20 were subjected to a restriction requirement in parent application serial number 09/409,520, and withdrawn from consideration by Examiner Zirker (see paper no. 2 in USSN 09/409,520). The examined subject matter of elected original claims 1-10 in parent application serial number 09/409,520 issued as U.S. Patent No. 6,316,099.

35 U.S.C. §121 prohibits double patenting rejections based on U.S. Patent No. 6,316,099 given that the present claims were filed in the present divisional application as a result of the above-described restriction requirement. See MPEP §804.01. Accordingly, withdrawal of this rejection and the allowance of claims 21-28 is respectfully requested. In addition, please note that since this rejection was improper and there is no other basis in the Office Action for rejecting claims 21-28, the final status of the last office action was premature and must be withdrawn. See MPEP §706.07(a).

## II. Prior Art Rejections

### Claim Rejections Under 35 U.S.C. §103(a)

Claims 11-20 are rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,284,360 issued to Johnson et al. (hereinafter "Johnson et al.") in view of Japanese Patent Application Publication No. 10195393 issued to Sekisui Chemical Company (hereinafter "Sekisui '393"). This rejection is respectfully traversed.

Applicants' claimed invention as embodied in independent claim 11 is directed to an article for establishing a seal between two substrates comprising, *inter alia*, a conformable, compressible, melt flow-resistant foam core; a photo-activated, epoxy-containing bulk layer having a first and second major surface, wherein the foam core is bonded to the second major surface of the bulk layer; and an epoxy-containing adhesive layer bonded to the first major surface of the bulk layer, wherein upon photo-activation, the bulk layer has a different curing rate than the adhesive layer.

Johnson et al. discloses a multi-layered article comprising a sealant layer 12, an optional bonding layer 16 a core layer 14 between sealant layer 12 and optional bonding layer 16, first substrate 20 and second substrate 24 as shown in FIG. 5. Examiner Chang acknowledges in the August 30, 2002 Office Action (paper no. 5) that the teaching of Johnson et al. fails to teach or suggest an article comprising a bulk layer and an adhesive layer, wherein the curing rate for the bulk layer is different than the curing rate for the adhesive layer (see August 30, 2002 Office Action, page 6, lines 3-5). However, Examiner Chang concludes that "it would be obvious to one of ordinary skill in the art to modify the sealant layer of Johnson et al. with the layered adhesive structure, as taught by Sekisui '393, motivated by the desire to obtain an excellent initial adhesive strength imparted by the difference in curing rates." See August 30, 2002 Office Action, page 6, lines 10-13. Applicants disagree.

Sekisui '393 discloses a multi-layered pressure-sensitive adhesive laminate comprising a first pressure-sensitive adhesive layer and a second pressure-sensitive adhesive layer, wherein the second pressure-sensitive adhesive layer has a cure rate 1.0 to 1.5 times faster than the cure rate of the first pressure-sensitive adhesive layer.

Applicants respectfully submit that there is no disclosure, teaching or suggestion in Johnson et al., Sekisui '393, or the combined teaching of Johnson et al. with Sekisui '393 that would motivate the person of ordinary skill in the art to substitute a multi-layered pressure-sensitive adhesive laminate, having a first pressure-sensitive adhesive layer and a second pressure-sensitive adhesive layer, for the sealant layer in the articles of Johnson et al. Nor is there any disclosure, teaching or suggestion in any of the cited prior art to replace the sealant layer in the articles of Johnson et al. with the Sekisui '393 multi-layered pressure-sensitive adhesive laminate, where the first and second pressure-sensitive adhesive layers have different cure rates. In fact, Johnson et al. expressly teaches away from both such substitutions.

Johnson et al. expressly define the terms "sealant composition" and "sealant layer" in column 1, line 58 through column 2, line 21. Pressure sensitive adhesives are expressly excluded from the definition of these terms (see Col. 2, lines 2-14). Therefore, not only is there no motivation to make the substitution asserted in the Office Action, the person of ordinary skill is actually taught away from substituting the Sekisui '393 pressure-sensitive adhesive layers for the Johnson et al. sealant layer. For at least this reason, Applicants respectfully submit that the proposed combination of the teachings of Johnson et al. and Sekisui '393 is improper. Therefore, for at least the reasons given above, Applicants respectfully submit that claim 11 is patentable over the art of record in this case. Since claims 12-20 depend from independent claim 11, and recite additional claim features, Applicants respectfully submit that claims 12-20 are also patentable over the art of record in this case. Accordingly, Applicants respectfully request withdrawal of this rejection and the allowance of claims 11-20.

The Examiner stated the following in the Advisory Action mailed on November 19, 2002:

"The Examiner further notes in passing that with respect to Applicants' argument that the reference JP '393 is not combinable with Johnson (Response, page 7, top paragraph), the Examiner should point out that both JP '393 and Johnson's inventions are directed to the same field of endeavor, that is a curable (e.g., thermoset) sealant for joining members. As such, it would have been obvious to one of ordinary skill in the art to combine the teachings of JP '393 and Johnson."

The Applicants are not arguing that the art is non-analogous. Rather, Applicants submit that Johnson provides no suggestion or motivation for combining the references.

Claim Rejections Under Obviousness-Type Double Patenting Over U.S. Patent No. 6,284,360 In View Of Japanese Patent Application Publication No. 10195393 (Sekisui '393)

In the April 03, 2002 Office Action, Examiner Chang rejected claims 11-20 under the judicially created doctrine of obviousness-type double patenting over claims 1-3, 5-10, 12-16, 18-25, 28-32 and 34-42 of U.S. Patent No. 6,284,360 issued to Johnson et al. in view of Japanese Patent Application Publication No. 10195393 (Sekisui '393). This rejection is respectfully traversed for at least the reasons given above with regard to the rejection of claims 11-20 under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,284,360 (Johnson et al) in view of Japanese Patent Application Publication No. 10195393 issued to Sekisui Chemical Company (Sekisui '393). Accordingly, Applicants respectfully request withdrawal of this rejection.

Applicants' Terminal Disclaimer Submitted on July 03, 2002

With regard to the rejection of claims 11-20 under the judicially created doctrine of obviousness-type double patenting, based on U.S. Patent No. 6,284,360 issued to Johnston et al. (hereinafter "Johnson et al.") in view of Japanese Patent Application Publication No. 10195393 issued to Sekisui Chemical Company (hereinafter "Sekisui '393"), Applicants note that the terminal disclaimer filed on July 23, 2002 was not accepted by Examiner Chang (see August 30, 2002 Office Action, page 5, lines 3-4). Applicants have not submitted another terminal disclaimer, and officially withdraw the July 23, 2002 terminal disclaimer from consideration in the present application. Because claims 11-20 are not obvious based on Johnson et al. and Sekisui '393, as discussed above, there is no need for a terminal disclaimer.

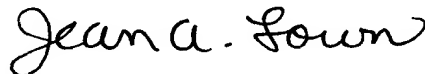
III. Conclusion:

For at least the reasons given above, Applicants submit that claims 11-30 are in condition for allowance. Accordingly, Applicants respectfully request allowance of these claims.

No additional fees are believed due; however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 10-1215.

Should the Examiner believe that anything further is necessary in order to place the application in better condition for allowance, the Examiner is respectfully requested to contact Applicants' representative at the telephone number listed below.

Respectfully submitted,



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Dated: December 2, 2002



MARKED-UP VERSION SHOWING CHANGES MADE U.S. Serial No. 09/713,382

**In The Specification:**

The paragraph from page 7, line 26 to page 8, line 3 was amended as follows:

In accordance with the present invention, the curing rate of the epoxy-containing, photo-activated compositions is affected in several ways. For example, the curing rate for the adhesive layer and the bulk layer can be differentiated through the selection of the type of epoxy, the thickness of each layer, the activation source, components within the epoxy-containing compositions, cure kinetics, or combinations thereof. The components within the composition that are capable of affecting the curing rate would include photo-initiators, accelerators, inhibitors, and sensitizers. Other factors that affect the curing rate include the concentration of photo-initiators, the absorption wavelength of photo-initiators, the extinction coefficient of photo-initiators or sensitizers, and the presence of epoxy-type accelerators. Those skilled in the art are capable of selecting and optimizing one or more of the noted means for adjusting the curing rate in order to obtain the article of the present invention.

The paragraph from page 12, lines 22-29 was amended as follows:

The article of the present invention can optionally include other layers of materials bonded to the second major surface of the bulk layer. FIG. 2 depicts one possible embodiment utilizing the multi-layered sealant composition of the present invention. The multi-layered sealant 20, having a bulk layer 22 and an adhesive layer 24, is shown in an exploded view between two substrates 32 and 40, respectively. An optional tie layer 28 is used to bond a core layer 30 to a major surface 26 of the bulk layer 22. A bonding layer 34 [is] can be applied onto the substrate 32, as indicated in FIG. 2, or can be integrally provided on the surface of the core layer 30.

**In the Claims:**

Please replace claims 29-30 with the following replacement claims:



29. (Amended) A construction comprising:

(I) an article for establishing a seal between two substrates, comprising:

(a) a conformable, compressible, melt flow-resistant foam core;

(b) a photo-activated, epoxy-containing bulk layer having a first and second major surface, said foam core bonded to the second major surface of said bulk layer; and

(c) an epoxy-containing adhesive layer bonded to the first major surface of said bulk layer, wherein upon photo-activation, said bulk layer has a different curing rate than said adhesive layer;

(II) a glass substrate bonded to the [bulk layer] foam core; and

(III) a second substrate bonded to the adhesive layer, wherein the second substrate is selected from glass, metal, plastic, wood, and ceramic.

30. (Amended) A construction comprising:

(I) an article for establishing a seal between two substrates, comprising:

(a) a conformable, compressible, melt flow-resistant foam core;

(b) a photo-activated, epoxy-containing bulk layer having a first and second major surface, said foam core bonded to the second major surface of said bulk layer; and

(c) an epoxy-containing adhesive layer bonded to the first major surface of said bulk layer, wherein upon photo-activation, said bulk layer has a different curing rate than said adhesive layer;

(II) a first substrate bonded to the [bulk layer] foam core; and

(III) a second substrate bonded to the adhesive layer; wherein the first substrate and the second substrate are each independently selected from glass, metal, plastic, wood, and ceramic substrates.